

WHAT IS CLAIMED IS:

1. A golf swing diagnosis system comprising:

a photographing means for photographing a swing moving image in a color image when a golfer swings;

5 a capturing means for capturing said photographed color image into a computer;

a recognizing means for recognizing at least two reference points which are specified in colors on said color image of said computer and are spaced at a given  
10 interval in a longitudinal direction of a golf club shaft gripped by said golfer; and recognizing one or more reference points which are specified in colors, move during said swing, and are selected from among a golfer's head, neck, right shoulder, left shoulder, right elbow,  
15 left elbow, left wrist, right wrist, right waist, left waist, right knee, left knee, right ankle, left ankle, right toe, and left toe;

a converting means for converting said swing moving image into a plurality of still images;

20 a means for computing a plurality of evaluation items to be checked including a swing posture and a shaft angle in a range from an addressing state till an impact state to express said evaluation items by numeric values, based on coordinate data of each of said reference points,  
25 disposed on a plurality of said still images, which are

discriminated in said colors, and

a diagnosing means for diagnosing said golfer's swing by comparing said data expressed by numeric values with judging data inputted to said computer in advance as ideal  
5 values.

2. The golf swing diagnosis system according to claim 1, wherein said specific colors to be discriminated as said reference points are colors attached to said shaft as a design, colors of golfer's clothes or colors applied  
10 to said shaft or said golfer at a photographing time.

3. The golf swing diagnosis system according to claim 1, wherein said reference points which are specified in colors and move during said golfer's swing include said golfer's wrist and elbow of an arm opposite to those of  
15 said golfer's skillful arm.

4. The golf swing diagnosis system according to claim 1, wherein the number of said reference points which are specified in colors is not less than three nor more than 18.

20 5. The golf swing diagnosis system according to claim 1, wherein said evaluation items to be checked include a shaft angle, an angle of said golfer's wrist, a position and an angle of said golfer's spine, both elbows, both shoulders, both waists, both knees, and grip which  
25 are computed from said coordinate data on each still image.

6. The golf swing diagnosis system according to claim 1, wherein said golfer's swing is photographed by two cameras at a position forward from said golfer and at a position rearward from said golfer in a ball fly line to  
5 obtain a front image and a rear image along said ball fly line, whereby two-dimensional coordinate data is obtained or three-dimensional coordinate data is obtained by converting a photographed image on said computer; or

swing images photographed by two or more cameras at  
10 positions other than said position forward from said golfer and said position rearward from said golfer along said ball fly line are converted into three-dimensional data on said computer to obtain coordinate data when said golfer is viewed at said position forward from said golfer  
15 and at said position rearward from said golfer in said ball fly line,

wherein said evaluation items to be checked include any one of a position of said golf ball, a width of said golfer's both ankles, an angle of said golfer's wrist, a  
20 position of said golfer's head, both waists, and grip viewed forward from said golfer; and a position of an axis of said golfer's spine, an angle of said spine, an angle of said knee, a position of both waists, both elbows, both shoulders, both knees, and both toes, and her/his grip,  
25 and a swing plane viewed at said position rearward from

said golfer along said ball fly line.

7. The golf swing diagnosis system according to claim 1, wherein when said golfer is viewed forward or/and rearward from said golfer, a swing posture of said evaluation item of said checking point includes any one of an addressing state, a state in which a shaft is an eight o'clock state, a state in which an arm opposite to a skillful arm is parallel with the ground, a top state, a state in which said arm opposite to said skillful arm is parallel with the ground in a swing-down motion, a state in which said shaft is in a nine o'clock state of a down-swing when a movement of said shaft is regarded as a movement of a hand of a clock, and an impact state.

8. The golf swing diagnosis system according to claim 7, wherein said eight o'clock state of said shaft means a state of a swing posture when a grip intersects with a perpendicular line to a right side of a right leg.

9. The golf swing diagnosis system according to claim 1, wherein said diagnosis means has a plurality of judging data having ideal values in dependence on handicap at golf, golf career, sex, age, height, weight, and a golfer's tendency of a hit-ball direction inputted to said computer in advance; and said diagnosis means selects appropriate judging data from a plurality of said judging data and compares said golfer's numeric data obtained by

photographing said golfer's swing with said selected judging data.

10. The golf swing diagnosis system according to claim 1, wherein at a time of a shot of a golf ball in  
5 said photographed swing, ball-hitting conditions including a ball speed, a deviation angle, a launch angle, and a spin amount are measured.

11. The golf swing diagnosis system according to claim 1, wherein at least one unoperative reference point  
10 which does not move from an addressing till an impact is specified in a color to evaluate movements of said other reference points relative to said unoperative reference point.